



## Curriculum Connections

### Herbal Science Inquiries

An herb planting offers countless opportunities for students to think and act like scientists. Their observations and questions should lead to fruitful investigations. Here are a few ideas for getting started:



**Spicy Plant Parts** - Provide or have students bring in a variety of dried herbs and spices. Challenge them to observe these and try to infer what part of the plant each ingredient comes from. Or bring in dried herbs and spices and the corresponding plants and seeds. Students can try to match the plants with their dried forms and seeds.

**Capture the Essence** - Have students "observe" their garden-grown herb plants using their noses, and then challenge them to figure out the best way, given their resources, to extract the smell/flavor from a plant. You might want to provide a variety of materials to prompt students' thinking, such as a toaster oven, hot plate, frying pan, and crushing and cutting utensils. (They might also

design a "smell test" to compare the abilities of different people to discriminate among herbs.)

**Test Herb Lore** - Once students have researched some of the lore and legends surrounding herbs, they might want to design tests to see if the tales have validity! For instance, the question "Do cats really go wild over catnip?" might prompt students to grow the mint, then design a fair test to see if cats prefer it to other members of the mint family, such as peppermint, basil, or spearmint.

**Finding the Winners** - Challenge students to experiment to test "the best" herb or combinations for particular purposes. For instance, they might search for the best spaghetti sauce or salad dressing combination, or most enticing herb for fragrant bath oil. Require students to back up their choices with data (gathered from classmates or families, for instance) rather than just stating their own opinions.

**Scavenger Hunt** - Consider developing or having students create a scavenger hunt for younger kids that focuses the hunters' attention on qualities of herbs. Here are some sample clues. *Find an herb that . . . smells like a mint . . . might taste good in spaghetti . . . has square-shaped stems . . . might repel fleas.*



**Adopt-an-Herb** - Whether your students are raising herbs indoors, in containers outdoors, or in their schoolyard garden, they can each adopt an herb to plant, tend, and research. Students should use seed packet directions, catalogs, or other sources to learn how to plant and care for their herbs; make routine observations and drawings; research their herbs' histories, folklore, and medicinal and culinary uses; and find recipes that feature their subjects. That done, students might create individual books (or a class compilation) featuring the life stories of their subjects.

### Exploring People and Herbs

Engage students in exploring how different people and cultures, past and present, have used herbs. Consider these suggestions:

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##### [Cool Herb Web Sites](#)

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#### Related Articles

##### [Historic Herbal Theme Gardens](#)

##### [Herbs Spice Up Learning](#)

##### [Aromatic History: Herbs in Colonial Life](#)

##### [Basil-Buy-Us](#)

#### Herb Caution

Herbs are powerful plants. Some, such as foxglove, are very poisonous; others, such as rue, can irritate skin. Even the "good" ones we typically use in small quantities. Caution students never to ingest any herb or other plant unless it is deemed safe by reliable adults and reference materials!

**NEW!** [Guide for School Garden Entrepreneurs](#)



**Family Favorites** - Ask students to interview family members to discover which herbs they currently use for cooking and other uses, and which types were traditionally used by their ancestors. As they learn about how herbs are and have been used in different cultures' cuisines, the class might want to cook an international meal. Create a class cookbook of favorite herb recipes. (When you cook with fresh herbs, you'll need to use three times the amount of dry herbs called for in the recipe to get similar results.)

**Herbs in History** - Have students research how people in a time period or culture they're studying (e.g., Pilgrims, pioneers, Native Americans, the Middle Ages, Victorian Era) used herbs for cooking, cosmetics, dyes, crafts, medicines, insect repellents, beverages, odor maskers, and so on.

They might want to try re-creating some of the end-products.

**Herbal Sleuthing** - Invite students to become herbal sleuths, looking for evidence of herbs in grocery stores, household products, pharmacies, and so on, then categorizing the ways in which we use herbs today. Consider experimenting with your own herbal product creations (see below).

## Creating Herbal Products

Here are some examples of the delights that can emerge from your herb garden. Web sites listed on the [Resources page](#) offer other advice.

**Fragrant sachets** - These are small cloth bags filled with herbs and other flowers that you can put in a drawer next to your clothes or hang in a closet to help make your clothes smell good. You can make bags with drawstrings so you can empty and refill them as the fragrance fades, or you can make little pillows by sewing together all of the edges of your sachet. For a strong, spicy fragrance, mix together dried leaves of basil, sage, lemon verbena, and thyme. Your students might use these as gifts or sell them to raise funds.

**Herb butter** - Students can make this spread for bread or crackers by letting a stick of butter soften at room temperature, adding a tablespoon of fresh chopped herbs to it (with a bit of salt and pepper, perhaps), and mashing the ingredients together. Try individual herbs or mixtures, such as chives, parsley, and dill.

**Herb Vinegars** - Slowly heat one quart of white or white wine vinegar in an enamel pan. (Don't boil it.) Add a handful of washed herb leaves and stems to an empty bottle. After patting them dry, pour in warm vinegar and store the bottle in a cool place. The flavored vinegar will be ready to use in salad dressing or for cooking in four to six weeks.



### A Colorful History

These aromatic plants, which have been surrounded by centuries of folklore and ritual, played vital roles in earlier times. (Did you know that basil has been alternately maligned for dulling the sight and revered as a holy herb? Its aroma was once believed to take away sadness and its oils were thought to "draw out poison from venomous beasts!")

Imagine how people coped hundreds or thousands of years ago without drugstores, grocery stores, sanitary facilities, cosmetic stores, or adequate clean bathing water. Without refrigeration, food would have spoiled quickly. What better way to disguise the odors and tastes of rotten food than with aromatic plants? The fragrances of many of these plants, in the form of potpourri, perfumes, and lotions, were also used to keep homes and bodies smelling fresh.

What might people in those days have done for a stomach ache? Through trial and error, they discovered that certain plants could be used to treat illness and injury. As it turns out, these observant people were onto something. In the late 1800s, chemists began isolating the chemicals in plants used to promote healing. (The word "drug" comes from the old Germanic word "drigan," which means "to dry," since drugs were originally dried herbs.)



NGA's latest book for educators, *Growing Ventures*, features stories of 18 student-run business projects, as well as step-by-step guidelines, activities, and worksheets for engaging students in planning and implementing a plant- or garden-related business that meets your curriculum goals. You'll find more details at our [Gardening with Kids Store](#).

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